6FV8A

Medium-Mu Triode-
Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3[a]	6.3 ± 0.6	volts
Current	0.450 ± 0.030	0.450[b]	amp
Warm-up time (Average)	11	–	sec

Peak heater-cathode voltage (Each unit):

Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200[c] max.	volts

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[d]	
Triode Unit:			
Grid to plate	1.8	1.8	pf
Grid to cathode, pentode cathode & pentode No.3 & internal shield, and heater	2.8	2.8	pf
Plate to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater	1.5	2	pf
Pentode Unit:			
Grid No.1 to plate	0.02 max.	0.01 max.	pf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	5	5	pf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	2	3	pf
Pentode plate to triode plate	0.15 max.	0.03 max.	pf

Characteristics, Class A$_1$ Amplifier:

	Triode Unit	*Pentode Unit*	
Plate Voltage	125	125	volts
Grid-No.2 Voltage	–	125	volts
Grid-No.1 Voltage	-1	-1	volt
Amplification Factor	45	–	
Plate Resistance (Approx.)	5600	200000	ohms
Transconductance	8000	6500	μmhos
Plate Current	12	12	ma
Grid-No.2 Current	–	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20	-7.5	-9	volts

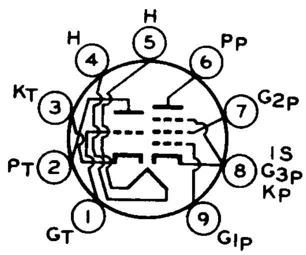
Mechanical:

Operating Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Diameter	0.750" to 0.875"

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Dimensional Outline . . . . See *General Section*
Bulb. T6-1/2
Base. . . . . Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW. 9FA

Pin 1 - Triode Grid
Pin 2 - Triode Plate
Pin 3 - Triode Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate
Pin 7 - Pentode Grid No. 2
Pin 8 - Pentode Cathode, Grid No. 3, Internal Shield
Pin 9 - Pentode Grid No. 1



AMPLIFIER — Class A₁ *(Pentode Unit)*

Maximum Ratings, *Design-Maximum Values:*

Plate Voltage	330 max.	volts
Grid-No. 2 (Screen-Grid) Supply Voltage. .	330 max.	volts
Grid-No. 2 Voltage	See *Grid-No. 2 Input Rating Chart* at front of Receiving Tube Section	
Grid-No. 1 (Control-Grid) Voltage:		
Positive-bias value	0 max.	volts
Grid-No. 2 Input:		
For grid-No. 2 voltages up to 165 volts. .	0.55 max.	watt
For grid-No. 2 voltages between 165 and 330 volts	See *Grid-No. 2 Input Rating Chart* at front of Receiving Tube Section	
Plate Dissipation	2.3 max.	watts

Maximum Circuit Values:

Grid-No. 1-Circuit Resistance:		
For fixed-bias operation.	0.25 max.	megohm
For cathode-bias operation.	1 max.	megohm

VERTICAL-DEFLECTION OSCILLATOR *(Triode Unit)*

Maximum Ratings, *Design-Maximum Values:*

For operation in a 525-line, 30-frame system[e]

DC Plate Voltage.	330 max.	volts
Peak Negative-Pulse Grid Voltage.	250 max.	volts
Cathode Current:		
Peak.	70 max.	ma
Average	20 max.	ma
Plate Dissipation	2 max.	watts

Maximum Circuit Values:

Grid-Circuit Resistance:		
For cathode-bias operation.	3 max.	megohms

[a] At heater amperes = 0.450.
[b] At heater volts = 6.3.
[c] The dc component must not exceed 100 volts.
[d] With external shield JEDEC No. 315 connected to pin 4.
[e] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.